



#5

SEQUENCE LISTING

<110> DeSavauge, Frederick  
Henner, Dennis, J.

<120> Novel chimpanzee erythropoietin  
polypeptides and nucleic acids encoding the same

<130> GENENT.057CP2

<150> US 09/307307

<151> 1999-05-07

<150> US 09/552265

<151> 2000-04-19

<160> 52

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 2329

<212> DNA

<213> Pan troglodytes

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<221> misc\_feature

<222> (1)...(2329)

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<213> Pan troglodytes

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Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Glu Val Arg Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
145 150 155 160  
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
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<211> 585  
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<213> Pan troglodytes

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aggtacctct tggaggccaa ggaggccgag aatatcacga cgggctgtgc cgaacactgc 180

agcttgaatg agaatatcac tgtcccagac accaaagtta atttctatgc ctggaagagg 240  
 atggagggtca ggcagcaggc cgtagaagtc tggcagggcc tggccctgct ctcggaagct 300  
 gtccctgcggg gccaggccct gttgggtcaac tcttcccagc cgtgggagcc cctgcagctg 360  
 catgtggata aagccgtcag tggccttcgc agcctcacca ctctgcttcg ggctctggga 420  
 gcccagaagg aagccatctc ccctccagat gcggcctcag ctgctccact ccgaacaatc 480  
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 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
 35 40 45  
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
 50 55 60  
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
 65 70 75 80  
 Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
 85 90 95  
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
 100 105 110  
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
 115 120 125  
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
 130 135 140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145 150 155 160  
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 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
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 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
 35 40 45  
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
 50 55 60  
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 65 70 75 80  
 Met Glu Val Arg Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu

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			100					105					110				
Gln	Pro	Trp	Glu	Pro	Leu	Gln	Leu	His	Val	Asp	Lys	Ala	Val	Ser	Gly		
		115					120					125					
Leu	Arg	Ser	Leu	Thr	Thr	Leu	Leu	Arg	Ala	Leu	Gly	Ala	Lys	Lys	Glu		
		130					135				140						
Ala	Ile	Ser	Pro	Pro	Asp	Ala	Ala	Ser	Ala	Ala	Pro	Leu	Arg	Thr	Ile		
145					150					155					160		
Thr	Ala	Asp	Thr	Phe	Arg	Lys	Leu	Phe	Arg	Val	Tyr	Ser	Asn	Phe	Leu		
				165					170					175			
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<213> Pan troglodytes

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<210> 7

<211> 4

<212> PRT

<213> Pan troglodytes

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<222> 2, 4

<223> Xaa = unknown amino acid

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<211> 4

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<213> Pan troglodytes

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<223> Xaa = unknown amino acid

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Asn Xaa Thr Xaa

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<211> 4

<212> PRT

<213> Pan troglodytes

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Glu Val Arg Gln

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<213> Pan troglodytes

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<210> 16  
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<212> DNA  
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<400> 16  
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<210> 17

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<211> 23  
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23

<210> 18  
<211> 166  
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<213> Pan troglodytes

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<222> 55, 57  
<223> Xaa = unknown amino acid

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35 40 45  
Tyr Ala Trp Lys Arg Asn Xaa Ser Xaa Gln Gln Ala Val Glu Val Trp  
50 55 60  
Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
65 70 75 80  
Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
85 90 95  
Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
100 105 110  
Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
115 120 125  
Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
130 135 140  
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Cys Arg Thr Gly Asp Arg  
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<212> PRT  
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<222> 55, 57  
<223> Xaa = unknown amino acid

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Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
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20 25 30  
Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
35 40 45

Tyr Ala Trp Lys Arg Asn Xaa Ser Xaa Gln Gln Ala Val Glu Val Trp  
 50 55 60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110  
 Gly Ala Lys Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
 130 135 140  
 Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
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 Cys Arg Thr Gly Asp Arg  
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 <212> PRT  
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 <222> 55, 57  
 <223> Xaa = unknown amino acid

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 35 40 45  
 Tyr Ala Trp Lys Arg Asn Xaa Thr Xaa Gln Gln Ala Val Glu Val Trp  
 50 55 60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110  
 Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
 130 135 140  
 Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
 145 150 155 160  
 Cys Arg Thr Gly Asp Arg  
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<210> 21  
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<220>  
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 <222> 55, 57

<223> Xaa = unknown amino acid

<400> 21

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20 25 30  
Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
35 40 45  
Tyr Ala Trp Lys Arg Asn Xaa Thr Xaa Gln Gln Ala Val Glu Val Trp  
50 55 60  
Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
65 70 75 80  
Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
85 90 95  
Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
100 105 110  
Gly Ala Lys Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
115 120 125  
Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
130 135 140  
Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
145 150 155 160  
Cys Arg Thr Gly Asp Arg  
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<210> 22

<211> 166

<212> PRT

<213> Pan troglodytes

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<221> UNSURE

<222> 56, 58

<223> Xaa = unknown amino acid

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20 25 30  
Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
35 40 45  
Tyr Ala Trp Lys Arg Met Asn Xaa Ser Xaa Gln Ala Val Glu Val Trp  
50 55 60  
Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
65 70 75 80  
Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
85 90 95  
Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
100 105 110  
Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
115 120 125  
Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
130 135 140  
Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
145 150 155 160  
Cys Arg Thr Gly Asp Arg



165

<210> 23  
 <211> 166  
 <212> PRT  
 <213> Pan troglodytes

<220>  
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 <222> 56, 58  
 <223> Xaa = unknown amino acid

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 Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
 20 25 30  
 Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
 35 40 45  
 Tyr Ala Trp Lys Arg Met Asn Xaa Ser Xaa Gln Ala Val Glu Val Trp  
 50 55 60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110  
 Gly Ala Lys Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
 130 135 140  
 Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
 145 150 155 160  
 Cys Arg Thr Gly Asp Arg  
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<210> 24  
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<220>  
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 <222> 56, 58  
 <223> Xaa = unknown amino acid

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 Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
 35 40 45  
 Tyr Ala Trp Lys Arg Met Asn Xaa Thr Xaa Gln Ala Val Glu Val Trp  
 50 55 60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95

Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110  
 Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
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 Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
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 <212> PRT  
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 <222> 56, 58  
 <223> Xaa = unknown amino acid

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 35 40 45  
 Tyr Ala Trp Lys Arg Met Asn Xaa Thr Xaa Gln Ala Val Glu Val Trp  
 50 55 60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110  
 Gly Ala Lys Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
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 Cys Arg Thr Gly Asp Arg  
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<220>  
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 <222> 57, 59  
 <223> Xaa = unknown amino acid

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Ins  
 B1  
 A1

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 Tyr Ala Trp Lys Arg Met Glu Asn Xaa Ser Xaa Ala Val Glu Val Trp  
 50 55 60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110  
 Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
 130 135 140  
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<211> 166

<212> PRT

<213> Pan troglodytes

<220>

<221> UNSURE

<222> 57, 59

<223> Xaa = unknown amino acid

<400> 27

Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
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 Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
 35 40 45  
 Tyr Ala Trp Lys Arg Met Glu Asn Xaa Ser Xaa Ala Val Glu Val Trp  
 50 55 60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110  
 Gly Ala Lys Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
 130 135 140  
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<211> 166

<212> PRT

<213> Pan troglodytes

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<221> UNSURE  
<222> 57, 59  
<223> Xaa = unknown amino acid

<400> 28

Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
1 5 10 15  
Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
20 25 30  
Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
35 40 45  
Tyr Ala Trp Lys Arg Met Glu Asn Xaa Thr Xaa Ala Val Glu Val Trp  
50 55 60  
Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
65 70 75 80  
Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
85 90 95  
Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
100 105 110  
Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
115 120 125  
Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
130 135 140  
Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
145 150 155 160  
Cys Arg Thr Gly Asp Arg  
165

<210> 29  
<211> 166  
<212> PRT  
<213> Pan troglodytes

<220>  
<221> UNSURE  
<222> 57, 59  
<223> Xaa = unknown amino acid

<400> 29

Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
1 5 10 15  
Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
20 25 30  
Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
35 40 45  
Tyr Ala Trp Lys Arg Met Glu Asn Xaa Thr Xaa Ala Val Glu Val Trp  
50 55 60  
Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
65 70 75 80  
Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
85 90 95  
Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
100 105 110  
Gly Ala Lys Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
115 120 125  
Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
130 135 140

Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
145 150 155 160  
Cys Arg Thr Gly Asp Arg  
165

<210> 30

<211> 166

<212> PRT

<213> Pan troglodytes

<220>

<221> UNSURE

<222> 58, 60

<223> Xaa = unknown amino acid

<400> 30

Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
1 5 10 15  
Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
20 25 30  
Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
35 40 45  
Tyr Ala Trp Lys Arg Met Glu Val Asn Xaa Ser Xaa Val Glu Val Trp  
50 55 60  
Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
65 70 75 80  
Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
85 90 95  
Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
100 105 110  
Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
115 120 125  
Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
130 135 140  
Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
145 150 155 160  
Cys Arg Thr Gly Asp Arg  
165

<210> 31

<211> 166

<212> PRT

<213> Pan troglodytes

<220>

<221> UNSURE

<222> 58, 60

<223> Xaa = unknown amino acid

<400> 31

Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
1 5 10 15  
Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
20 25 30  
Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
35 40 45  
Tyr Ala Trp Lys Arg Met Glu Val Asn Xaa Ser Xaa Val Glu Val Trp  
50 55 60  
Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu

65                      70                      75                      80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
                                  85                      90                      95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
                                  100                      105                      110  
 Gly Ala Lys Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
                                  115                      120                      125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
                                  130                      135                      140  
 Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
 145                      150                      155                      160  
 Cys Arg Thr Gly Asp Arg  
                                  165

<210> 32  
 <211> 166  
 <212> PRT  
 <213> Pan troglodytes

<220>  
 <221> UNSURE  
 <222> 58, 60  
 <223> Xaa = unknown amino acid

<400> 32  
 Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
 1                      5                      10                      15  
 Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
                                  20                      25                      30  
 Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
                                  35                      40                      45  
 Tyr Ala Trp Lys Arg Met Glu Val Asn Xaa Thr Xaa Val Glu Val Trp  
                                  50                      55                      60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65                      70                      75                      80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
                                  85                      90                      95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
                                  100                      105                      110  
 Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
                                  115                      120                      125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
                                  130                      135                      140  
 Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
 145                      150                      155                      160  
 Cys Arg Thr Gly Asp Arg  
                                  165

<210> 33  
 <211> 166  
 <212> PRT  
 <213> Pan troglodytes

<220>  
 <221> UNSURE  
 <222> 58, 60  
 <223> Xaa = unknown amino acid

<400> 33

Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu  
 1 5 10 15  
 Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His  
 20 25 30  
 Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe  
 35 40 45  
 Tyr Ala Trp Lys Arg Met Glu Val Asn Xaa Thr Xaa Val Glu Val Trp  
 50 55 60  
 Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu  
 65 70 75 80  
 Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp  
 85 90 95  
 Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu  
 100 105 110  
 Gly Ala Lys Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala  
 115 120 125  
 Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val  
 130 135 140  
 Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala  
 145 150 155 160  
 Cys Arg Thr Gly Asp Arg  
 165

<210> 34  
 <211> 193  
 <212> PRT  
 <213> Pan troglodytes

<220>  
 <221> UNSURE  
 <222> 82, 84  
 <223> Xaa = unknown amino acid

<400> 34  
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
 1 5 10 15  
 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
 20 25 30  
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
 35 40 45  
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
 50 55 60  
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
 65 70 75 80  
 Asn Xaa Ser Xaa Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
 85 90 95  
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
 100 105 110  
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
 115 120 125  
 Leu Arg Ser Leu Thr Thr Leu Arg Ala Leu Gly Ala Gln Lys Glu  
 130 135 140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145 150 155 160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
 165 170 175  
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
 180 185 190

Arg

<210> 35  
<211> 193  
<212> PRT  
<213> Pan troglodytes

<220>  
<221> UNSURE  
<222> 82, 84  
<223> Xaa = unknown amino acid

InS  
B1  
AT

<400> 35  
Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Asn Xaa Ser Xaa Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
145 150 155 160  
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
165 170 175  
Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
180 185 190

Arg

<210> 36  
<211> 193  
<212> PRT  
<213> Pan troglodytes

<220>  
<221> UNSURE  
<222> 82, 84  
<223> Xaa = unknown amino acid

<400> 36  
Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu



50                      55                      60  
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
 65                      70                      75                      80  
 Asn Xaa Thr Xaa Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
                          85                      90                      95  
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
                          100                      105                      110  
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
                          115                      120                      125  
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
                          130                      135                      140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145                      150                      155                      160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
                          165                      170                      175  
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
                          180                      185                      190  
 Arg

<210> 37  
 <211> 193  
 <212> PRT  
 <213> Pan troglodytes

<220>  
 <221> UNSURE  
 <222> 82, 84  
 <223> Xaa = unknown amino acid

<400> 37  
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
 1                      5                      10                      15  
 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
                          20                      25                      30  
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
                          35                      40                      45  
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
                          50                      55                      60  
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
 65                      70                      75                      80  
 Asn Xaa Thr Xaa Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
                          85                      90                      95  
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
                          100                      105                      110  
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
                          115                      120                      125  
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu  
                          130                      135                      140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145                      150                      155                      160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
                          165                      170                      175  
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
                          180                      185                      190  
 Arg

<210> 38

<211> 193  
<212> PRT  
<213> Pan troglodytes

<220>  
<221> UNSURE  
<222> 83, 85  
<223> Xaa = unknown amino acid

<400> 38

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Asn Xaa Ser Xaa Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
145 150 155 160  
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
165 170 175  
Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
180 185 190

Arg

<210> 39  
<211> 193  
<212> PRT  
<213> Pan troglodytes

<220>  
<221> UNSURE  
<222> 83, 85  
<223> Xaa = unknown amino acid

<400> 39

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80

Met Asn Xaa Ser Xaa Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
145 150 155 160  
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
165 170 175  
Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
180 185 190

Arg

<210> 40  
<211> 193  
<212> PRT  
<213> Pan troglodytes

<220>  
<221> UNSURE  
<222> 83, 85  
<223> Xaa = unknown amino acid

<400> 40  
Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Asn Xaa Thr Xaa Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
145 150 155 160  
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
165 170 175  
Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
180 185 190

Arg

<210> 41  
<211> 193  
<212> PRT  
<213> Pan troglodytes

<220>  
<221> UNSURE  
<222> 83, 85  
<223> Xaa = unknown amino acid

<400> 41

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Asn Xaa Thr Xaa Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
145 150 155 160  
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
165 170 175  
Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
180 185 190

Arg

<210> 42  
<211> 193  
<212> PRT  
<213> Pan troglodytes

<220>  
<221> UNSURE  
<222> 84, 86  
<223> Xaa = unknown amino acid

<400> 42

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Glu Asn Xaa Ser Xaa Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser

100 105 110  
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
 115 120 125  
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
 130 135 140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145 150 155 160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
 165 170 175  
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
 180 185 190

Arg

<210> 43  
 <211> 193  
 <212> PRT  
 <213> Pan troglodytes

<220>  
 <221> UNSURE  
 <222> 84, 86  
 <223> Xaa = unknown amino acid

<400> 43  
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
 1 5 10 15  
 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
 20 25 30  
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
 35 40 45  
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
 50 55 60  
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
 65 70 75 80  
 Met Glu Asn Xaa Ser Xaa Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
 85 90 95  
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
 100 105 110  
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
 115 120 125  
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu  
 130 135 140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145 150 155 160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
 165 170 175  
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
 180 185 190

Arg

<210> 44  
 <211> 193  
 <212> PRT  
 <213> Pan troglodytes

<220>  
 <221> UNSURE

<222> 84, 86

<223> Xaa = unknown amino acid

<400> 44

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Glu Asn Xaa Thr Xaa Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
145 150 155 160  
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
165 170 175  
Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
180 185 190  
Arg

<210> 45

<211> 193

<212> PRT

<213> Pan troglodytes

<220>

<221> UNSURE

<222> 84, 86

<223> Xaa = unknown amino acid

<400> 45

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Glu Asn Xaa Thr Xaa Ala Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125

Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu  
 130 135 140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145 150 155 160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
 165 170 175  
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
 180 185 190  
 Arg

<210> 46  
 <211> 193  
 <212> PRT  
 <213> Pan troglodytes

<220>  
 <221> UNSURE  
 <222> 85, 87  
 <223> Xaa = unknown amino acid

<400> 46  
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
 1 5 10 15  
 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
 20 25 30  
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
 35 40 45  
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
 50 55 60  
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
 65 70 75 80  
 Met Glu Val Asn Xaa Ser Xaa Val Glu Val Trp Gln Gly Leu Ala Leu  
 85 90 95  
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
 100 105 110  
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
 115 120 125  
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
 130 135 140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145 150 155 160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
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 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
 180 185 190  
 Arg

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 <212> PRT  
 <213> Pan troglodytes

<220>  
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 <222> 85, 87  
 <223> Xaa = unknown amino acid

<400> 47

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20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Glu Val Asn Xaa Ser Xaa Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
145 150 155 160  
Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
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Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
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Arg

<210> 48

<211> 193

<212> PRT

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<220>

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<222> 85, 87

<223> Xaa = unknown amino acid

<400> 48

Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
1 5 10 15  
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu  
20 25 30  
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
35 40 45  
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
50 55 60  
Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
65 70 75 80  
Met Glu Val Asn Xaa Thr Xaa Val Glu Val Trp Gln Gly Leu Ala Leu  
85 90 95  
Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
100 105 110  
Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
115 120 125  
Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu  
130 135 140  
Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile



145 150 155 160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
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 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
 180 185 190  
 Arg

<210> 49  
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<220>  
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 <222> 85, 87  
 <223> Xaa = unknown amino acid

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 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu  
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 20 25 30  
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu  
 35 40 45  
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu  
 50 55 60  
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg  
 65 70 75 80  
 Met Glu Val Asn Xaa Thr Xaa Val Glu Val Trp Gln Gly Leu Ala Leu  
 85 90 95  
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser  
 100 105 110  
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly  
 115 120 125  
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Lys Lys Glu  
 130 135 140  
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile  
 145 150 155 160  
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu  
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 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp  
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 Arg

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 <212> DNA  
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<400> 51  
gctctagact catctgtccc ctgtcctgca gg

32

<210> 52  
<211> 35  
<212> DNA  
<213> Synthetic

<400> 52  
gtccgggtga cccctctgtc ccctgtcctg caggc

35

Ins  
B.  
A  
Concludes